

The African and Madagascan freshwater crabs in the Zoologische Staatssammlung, Munich

(Crustacea, Decapoda, Brachyura, Potamoidea)

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The collection of African and Madagascan freshwater crabs in the Zoologische Staatssammlung, Munich has been reevaluated. The collection includes twenty eight species of *Potamonautes*, seven species of *Sudanonautes*, two species each of *Platythelphusa*, *Hydrothelphusa*, *Deckenia*, *Potamonemus*, and *Louisea*, and one species each of *Liberonautes*, *Gecarcinautes* and *Potamon*. The collection includes the holotype of *Louisea edaeansis*, and paratypes of *L. balssi*, *Sudanonautes monodi* and *Potamonautes gerdalensis*.

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Introduction

The collection of freshwater crabs from Africa in the Zoologische Staatssammlung, Munich (ZSM) owes a great deal to the efforts of Prof. Heinrich Balss (1886-1957) who, in addition to his work on the Decapoda in general, authored a number of articles on the taxonomy of African freshwater crabs. These works included material held in the ZSM from East and West Africa (1914a), West Africa (Balss 1929a), East Africa and Madagascar (Balss 1929b, 1934), and Central and southern Africa (Balss 1914b, 1922, 1936). The present work represents an attempt to identify and catalogue the African and Madagascan freshwater crab material in the ZSM according to the most recent taxonomic conventions for the group.

Data on the material examined are listed in the following order: region of Africa, country, original collection locality and modern equivalent, number of males and /or females, state of maturity, date, name of collector and / or donator, and ZSM inventory number. The following abbreviations are used: MLü = Museum Lübeck, Germany; MNHN = Muséum National d'Histoire Naturelle, Paris, France; MRAC = Museum Royal d'Afrique Centrale, Tervuren, Belgium; NHML = Natural History Museum, London; ZMB = Museum für Naturkunde der Humboldt-Universität, Berlin, Germany; cw = carapace width at widest point; cl = carapace length measured along median line, the distance from the midpoint of the frontal margin to the midpoint of the posterior margin; ch = carapace height, maximum height of cephalothorax; fw = front width, width of front measured along its anterior margin; coll. = collected by; don. = donated by; ad. = adult; subad. = subadult; juv. = juvenile. All measurements are given in mm.

Taxonomy

The majority of the specimens from East African and Madagascar in the present work were initially identified by Dr. Balss. This determination has since been updated to conform to the classification of Bott (1955) who completely revised the taxonomy of the entire continental African freshwater crab fauna. Bott's (1955) classification departed from that of Balss (1914a,b, 1929a,b, 1936) in a number of ways and, until recently, was widely accepted. However, Bott's (1955) taxonomy is now out of date and contains a number of errors. The West African freshwater crab fauna was recently revised by Cumberlidge (1998), but the taxonomy of the East African freshwater crabs fauna (especially *Potamonantes*) is still questionable, despite the contributions by Williams (1991) and Ng et al. (1995). Bott also published the most recent classification of the entire Madagascan freshwater crab fauna (Bott 1965), which was recently modified in part by Ng & Takeda (1994). However, a great deal of uncertainty still surrounds the taxonomy of the Madagascan freshwater crabs, and a comprehensive revision is badly needed.

The taxonomy followed in the present work for the freshwater crabs from continental Africa is that of Cumberlidge (1987, 1991, 1993a,b,c, 1994a,b, 1995a,b,c,d, 1998), Cumberlidge & Sachs (1989a,b), and Cumberlidge & Clark (1992). These works include a substantial number of changes to the taxonomy suggested by Bott (1955, 1959, 1964, 1970a,b). Notably, all of Bott's subgeneric categories, and most of his specific categories are not used here, and many of his synonymies are not accepted.

The collection of the ZSM includes one species of *Potamon* Savigny, 1816 (Potamidae) from North Africa and two species of *Deckenia* Hilgendorf, 1869 (Deckeniidae) from East Africa. The majority of specimens in the collection of the ZSM come from continental Africa and belong to the Potamonautidae. They are referred here to six genera: *Potamonantes* MacLeay, 1838, *Platythelphusa* A. Milne-Edwards, 1887, *Sudanonantes* Bott, 1955, *Liberonantes* Bott, 1955, *Potamonemus* Cumberlidge & Clark, 1992 and *Louisea* Cumberlidge, 1994a. In addition, the collection of the ZSM includes four species of freshwater crabs from Madagascar which are included here in two genera, *Hydrothelphusa* A. Milne-Edwards, 1872 and *Gecarcinautes* Bott, 1960. However, the taxonomy of the freshwater crabs from Madagascar is far from stable.

The identification of a number of other specimens of freshwater crabs from Madagascar in the ZSM collection present difficulties in their generic assignment. A definitive assignment of these specimens awaits a complete taxonomic revision of the Madagascan freshwater crabs and so these specimens are listed here under their original name. The use of the genus *Potamon* does not imply that they belong to the genus *Potamon* sensu Bott, 1970b (they most definitely do not), it simply reflects uncertainty as to their correct assignment. According to the literature, there are at present four genera of freshwater crabs found in Madagascar: *Hydrothelphusa*, *Gecarcinautes*, *Madagapotamon* and *Skelosophusa*. Ng and Takeda (1994) assigned two of these genera (*Madagapotamon* and *Skelosophusa*) to the Potamonautidae, and Bott (1965) assigned *Hydrothelphusa* to the Hydrothelphusinae and *Gecarcinautes* to the Gecarcinucidae.

Deckeniidae Ortmann, 1897

Deckenia Hilgendorf, 1869

Deckenia Hilgendorf, 1869: 2; 1898: 23; Rathbun 1906: 69; 1921: 434; Balss 1929b: 353; Chace 1942: 225; Bott 1955: 219.

Deckenia imitatrix Hilgendorf, 1869

Deckenia imitatrix Hilgendorf, 1869: 24, fig. 8; Ortmann 1902: 306; Bott 1955: 219, fig. 6, pl. 1, figs 1a-d; Pretzmann 1977: figs 17-20; Ng et al. 1995: 583, tabs 1, 2.

Material. East Africa, Taro (Taro?, in Kenya there is a place called Taru, northwest of Mombasa), probably Kenya (formerly British East Africa), 1♂ ad. cw 40.9, 1 juv. 26.6, O. Neumann coll. (ZSM 1235/1).

Comments. This East African family comprises one genus with two species and is found in Tanzania (Zanzibar), Kenya, and Somalia. Both species are represented in the collection of the ZSM. This genus was recently reviewed by Ng et al. (1995) who provided detailed comparisons between the two species. Bott (1955) provided photographs of the whole animal and a sketch of the first gonopod; he pointed out that the type locality is Zanzibar (and not Kudiano, East Africa, as was cited by Chace, 1942).

Pretzmann (1977) provided photographs of the carapace and gonopod 1 of a specimen of *D. imitatrix* from Somalia.

Deckenia mitis Hilgendorf, 1898

Deckenia mitis Hilgendorf, 1898: 24, fig. 8; Ortmann 1902: 306; Bott 1955: 221, fig. 5, pl. 1 figs 2a-d; Ng et al. 1995: 583-585, figs 1b, 2, 3, tabs 1,2.

Material. East Africa, Tanzania (formerly German East Africa), Ruwana river, which flows into Lake Victoria at Speke Gulf), 1♂ ad. cw 31.3, 1♀ ad. 30.2 (hatchlings), several soft-shelled small crabs (cw 11), 1911, Kattwinkel coll. (ZSM 1236/1); Kilimatinde, northwest of Dodoma, "Turuexpedition", 1♂ ad. cw 48.3, Claiss? coll. (ZSM 1236/2, don. ZMB 13505); Usa river, east of Arusha, 1♂ ad. cw 33, freshwater, 25 °C, 11.1959 (ZSM 1236/3).

Comments. Bott (1955) provided photographs of the whole animal and a sketch of the first gonopod; he also listed a number of differences between *D. mitis* and *D. imitatrix*. The differences between the two species were tabulated by Ng et al. (1995), who added new characters and provided illustrations of the gonopods, the mandibles and the mouthparts. The chelipeds of the adult female in the present study were observed to be small and equal sized, and are not greatly heterochelous (with one much larger than the other) as is the case for adult males.

The type locality (Wembere Steppe (n. Tabora), East Africa) is probably in Tanzania. In the region of Tabora the Ruwana river flows into Lake Victoria at Speke Gulf, and this is where some of the ZSM material was collected. It is interesting to note that *Potamonautes gerdalensis* Bott, 1955 was also collected in this same region. The new localities for *D. mitis* are all in Tanzania. Williams, Hynes & Kershaw (1964) provided some observations on the habitat of *D. mitis* caught in an arid area of northern Tanzania close to Mount Meru. Specimens of *D. mitis* were collected in stagnant surface waters (which were also quite warm), and this species was never found in the cooler streams flowing down mountain slopes. *Deckenia mitis* was collected together with *Potamonautes obesus* which apparently shares the same habitat. *Deckenia mitis* and *P. obesus* were rarely observed in the water by these workers and both species burrowed deeply into the soil at the water's edge and often caused extensive damage to drainage ditches.

Potamidae Ortmann, 1896

This family is represented in continental Africa by a single species, *Potamon fluviatilis algeriense* (Bott, 1967). This taxon occurs only in the northwest region of Africa in the Mediterranean countries of Algeria, Tunisia, and Morocco. The ZSM collection includes specimens from the first of these countries.

Potamon Savigny, 1816

Potamon Savigny, 1816: 251.

Potamon fluviatilis algeriense (Bott, 1967)

Potamon fluviatilis algeriense Bott, 1967: 130, pl. 5, figs 40-43; Bott 1970a: 339; 1970b: 136, pl. 37, fig. 2, pl. 42, fig. 2.

Material. North Africa, Algeria, Algiers = Alger, El Kantara, ca. 30 km north of Biskra, southeast of Lake Chott el Hodna, 1♂ ad. cw 30.8, 2 juvs. cws 20, 18, G. F. de Witte coll. (ZSM 1522/1 ex 1154/5, alte ZSM Nr. 1935, don. MRAC).

Comments. This genus was most recently reviewed by Bott (1970b), whose taxonomy is followed here. The synonymy for this species is provided by Bott (1970b). The mandibular palp of these specimens consists of three distinct segments which (together with other characters) warrants their inclusion in the Potamidae rather than in the Potamonautidae. With the exception of *Platythelphusa* from Lake Tanganyika, all other freshwater crabs from continental Africa and from Madagascar have a mandibular palp with two distinct segments.

Potamonautidae Bott, 1970a

Erimetopus A Milne-Edwards, 1886

Erimetopus Rathbun, 1894: 26; *Potamonautes* (*Erimetopus*), Bott 1955: 223.

Erimetopus brazzae Rathbun, 1905

Thelphusa brazzae A. Milne-Edwards, 1886: 148; Ortmann 1897: 300; *Parathelphusa brazzae*, A. Milne-Edwards 1887: 142, pl. 8, fig. 6; de Man 1898: 438; *Erimetopus brazzae*, Rathbun 1905: 270, fig. 73, pl. 21, fig. 8; Lenz 1912: 9; Colosi 1920: 27; Rathbun 1921: 433-434, pl. 33, fig. 15; Balss 1936:195; Chace 1942: 225; Capart 1954: 846, fig. 43; *Potamonautes* (*Erimetopus*) *brazzae*, Bott 1955: 224-225, figs 7a-b, pl. III, figs 1a-c.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Kinshasa (formerly Léopoldville), 1933, 1♀ ad. cw 31.5 (ovig.), A. Tinant coll. (ZSM 1528/1, ex 1184/1, don. MRAC).

Comments. Bott (1955) considered *E. brazzae* to belong to the genus *Potamonautes* and recognised the subgenus (*Erimetopus*) to accommodate this species. Bott (1955) used characters of the first and second gonopod to assign taxa to genus, subgenus and species categories. Since *E. brazzae* is known only from female specimens the structure of gonopods 1 and 2 of this species are still unknown. For this, and other, reasons Bott's (1955) opinion is not accepted and *E. brazzae* is recognised here as a distinct genus. The structure of the mandibular palp of *E. brazzae* (two-segmented with a simple terminal segment) argues for its inclusion in the Potamonautidae.

Potamonautes MacLeay, 1838

Twenty eight species of *Potamonautes* are represented in the collection of the ZSM. The species are arranged alphabetically. None of the subgenera of *Potamonautes* erected by Bott (1955) are recognised here.

Potamonautes aloysiisabaudiae (Nobili, 1906)

Potamon (*Potamonautes*) *Aloysii-Sabaudiae* Nobili, 1906:1; *Potamon* (*Potamonautes*) *johnstoni* Calman, 1909: 51-56, figs 9, 10, 12 [non *Johnstoni* Miers]; *Potamonautes* (*Lobopotamonautes*) *aloyssiisabaudiae*, Bott 1955: 281-283, pl. 18, figs 2a, 3a, pl. 20, figs 2a-d, figs 1, 2, figs 48, 50, 87, 88, 89.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Avakubi, on the Ituri river, northeast of Kisangani (formerly Stanleyville), 1♂ subad. cw 22.6, 1♀ subad. cw 22.4, 11.09.1912, Christy coll. (ZSM 1175/2); Bondo Mabé, near Arebi, south of Watsa, 2♂♂ cws 41.7, 27.2, 07.1925, H. Schouteden coll. (ZSM 1175/3); Mauda, south of Doruma, upper Uele river (formerly Uelle river), 1♂ ad. cw 41.5, 2♀♀ subads. cws 38.4, 29.6, 03.1925, H. Schouteden coll. (ZSM 1175/4); upper Uele river (formerly Uelle river), 1♂ subad. cw 35.2, 2♀♀ subads. cws 39.8, 37.4, 08.1924, Rossi coll. (ZSM 1175/5).

Comments. Bott (1955) synonymized this species with a number of published taxa. However, comparisons between the type material of some (but not all) of Bott's (1955) synonymized taxa raise doubts about the validity of Bott's (1955) conclusions, which are not accepted here. The specimens in the ZSM correspond well with *Potamon* (*Potamonautes*) *johnstoni* from Ruwenzori which was described and illustrated by Calman (1909). The specimen of *P. aloysiisabaudiae* from Ruwenzori used by Nobili (1906) to describe the species is apparently lost, and Nobili's (1906) original description was brief; Calman's (1909) specimens from Ruwenzori are therefore used here as examples of the species. *Potamonautes aloysiisabaudiae* can be recognised by the following characters: the suborbital margins and the anterolateral margins of the carapace are completely smooth, the epibranchial tooth is low or absent, the exorbital angle is low, the vertical sulcus on the sidewalls in the subhepatic region is faint, the 4th episternal suture is missing, there is no vertical sulcus on the ischium of the third maxilliped, and there is a small raised longitudinal crest running along the centre of the terminal segment of gonopod 1.

Potamonautes anchetiae (Brito-Capello, 1871)

Thelphusa Anchetiae Brito-Capello, 1871: 132, pl. 2, fig. 11; *Potamonautes (Isopotamonautes) anchetiae*, Bott 1955: 247-249, figs 24, 76, 77, pl. IX, figs 1a-d.

Material. Central Africa, Angola, Benguela, Entre Rios?, 1♀ subad. cw 34.6, 06.1954, Schönfeld coll. (ZSM 1535/1 ex 1176/4).

Comments. Bott (1955) assigned specimens of *P. anchetiae* to the subgenus *Isopotamonautes* Bott, 1955, but this subgenus is not recognised here. Balss (1929a) identified as “*P. anchetiae*” a number of specimens from Cameroon that are now known to belong to *Potamonemus mambilorum* (Cumberlidge & Clark, 1992).

Potamonautes ballayi (A. Milne-Edwards, 1886)

Thelphusa Ballayi A. Milne-Edwards, 1886: 149; *Potamon ballayi*, Chace 1942: 206; Capart 1954: 827, fig. 3; *Potamonautes (Longipotamonautes) ballayi ballayi*, Bott 1955: 244-245, figs. 23, 73, pl. VII, fig. 2a-d.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Djamba Lower Uele river (formerly Uelle river), 3♂♂ ads. cws 28.3, 25.9, 24.8, 2♀♀ ads. cws 23.8, 25.2, 1♀ subad. cw 19.7, 20.12.1925, H. Schouteden coll. (ZSM 1178/1); Kinshasa (formerly Léopoldville), 1933, 1♂ ad. cw 19.3, 1♀ ad. cw 19.2, A. Tinant coll. (ZSM 1178/2, don. MRAC); Bambesa, Uele river (formerly Uelle river), 3♂♂ ads. cws 25.2, 20.1, 21.4, 3♀♀ ads. cws 22.8, 22.1, 23.1, 14.10.1933, H. Bredo coll. (ZSM 1178/3, don. MRAC).

Comments. Bott (1955) assigned specimens of *P. ballayi* to the subgenus *Longipotamonautes* Bott, 1955, but this subgenus is not recognised here. *Potamonautes ballayi* can be recognised by a distinct and sharp epibranchial tooth and the lack of other teeth on the anterolateral margin. In addition, the sidewalls are divided into two parts by the epimeral suture, and the major cheliped of adult males is enlarged with a widely arched dactylus and a propodus that is longer than the carapace width.

Potamonautes bayonianus (Brito-Capello, 1864)

Thelphusa Bayoniana Brito-Capello, 1864: 2, pl. 3, fig. 3; *Potamon (Potamonautes) bayonianus*, Barnard 1950: 191-192; *Potamonautes (Potamonautes) bayonianus bayonianus*, Bott 1955: 251-252, pl. X, figs 2a-d, fig. 28.

Material. Southern Africa, 1♂ cw 28.5, 2 juvs. 25.8, 15.9, allegedly Tanzania (formerly German East Africa), Amani, more likely Zimbabwe (formerly Southern Rhodesia), Dingler coll. (ZSM 1179/1, Trockenmaterial, Nr. 1920/501); Zimbabwe (formerly Southern Rhodesia), 3♂♂ cws 27.0, 24.2, 18.6, Dingler coll. (ZSM 1179/2 ex 1180/1); Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), lower course of the Congo river, formerly Matadi-District, Ango-Ango? (probably Langa-Langa, near Kinshasa, on the lower Congo river), 1♀ ad. cw 47, 05.1923, Maur. Bequaert coll. (ZSM 1176/3 ex 1176/2).

Comments. *Potamonautes bayonianus* can be recognised by a postfrontal crest that completely crosses the carapace and by the fields of granules on the sidewalls, which are divided into four parts. This is a large species distributed over a wide area of southern Africa from the lower Congo river to Zimbabwe, Namibia, and South Africa.

Potamonautes berardi (Audouin, 1826)

Thelphusa Berardi Audouin, 1826: 82, pl. 2, fig. 6; *Potamon berardi*, Capart 1954: 827, figs 4, 31; *Potamonautes (Rotundopotamonautes) berardi berardi*, Bott 1955: 288-289, figs 53a-b, pl. 23, figs 1a-d; Monod, 1980: 382-383, pl. V, fig. 28.

Material. Fajum, Massaré (probably Egypt, Faiyum Province, 1♀ cw 31.2 (ovig.) (ZSM 1181/1); East Africa, Rwanda (formerly the Belgian Congo, and before that German East Africa) Nyanza (formerly Niansa) southeast of Lake Kivu, 1♂ ad. cw 24.3, Herzog Adolf F. von Mecklenburg coll. (ZSM 1181/2, don. MLü 1112a/245); East Africa, Ruamzoni? (probably the Ruwenzori Mountains in Uganda), 1♂, 1♀, Herzog Adolf F. von Mecklenburg coll. (ZSM 1181/3, don. MLü 1123/245); Northeast Africa, Ethiopia (formerly Abyssinia), Mount Gara Mulata

(= Mount Gara Muleta), southwest of Harar (=Harer), 2700m, 2♀ cws 23, 23.2 (both ovig.), Carlo Freiherr von Erlanger, 03.1900 (ZSM 1181/4); Gardulla stream, Gardulla near Gidole, Gamu(=Gemu)-Gofa-District, south of Lake Chamo, 2300m, 2♀ ads. cws 26, 22 (ovig.), 1♀ subad. cw 18.8, 05.01.1901, O. Neumann, coll. (ZSM 1181/5); stream near Gorgias?, Georgis? (Sciré), stream near Hauasch (now Awash river), running water, 2300-2400m, 1♀ ad. cw 29.3, 1♀ subad. cw 21.7, several juvs., 30.07.1900, Carlo Freiherr von Erlanger coll. (ZSM 1181/6 ex 1186/1); 1♀ ad. cw 35.6, 1♀ subad. cw 30.9, 1♂ subad. cw 29.2, 3 juvs. (ZSM 1186/7); Sheik-Mohamed-Lager, stream at Wabbi? (probably Web), running water, northwest of Ginir, Arussi-District, 1900-2100m altitude (ca. 7°19'N, 40°30'E), 1♀ ad. cw 37.0 (ovig.), 1♀ ad. cw 39.1, 1♂ subad. cw 29.8 (gonopods in vial), 5 juvs., 11.07.1900, Carlo Freiherr von Erlanger coll. (ZSM 1181/8 ex 1186/3); Harar (=Harer), Ererfluss-Quelle, Abessinien, 1♀ ad. cw 33.5, 1♀ subad. cw 26.6, 07.1900?, Carlo Freiherr von Erlanger and O. Neumann coll. (ZSM 1181/9 ex 1186/4).

Comments. The complete synonymy is provided by Bott (1955). *Potamonautes berardi* can be recognised by a deep and complete suture between sternites 2 and 3, by a faint almost absent postfrontal crest, by the lack of an epibranchial tooth, and by the lack of a vertical sulcus on the ischium of the third maxilliped. This is a small species found in the river Nile (in Egypt, Ethiopia, Uganda, and Rwanda) which reaches maturity at about cw 23.

Potamonautes bipartitus (Hilgendorf, 1898).

Thelphusa bipartita Hilgendorf, 1898: 15-16; *Potamonautes* (*Arcopotamonautes*) *bipartitus*, Bott 1955: 273-274, figs 42, 43, 85, pl. 18, figs 1a-d, 4a-b.

Material. East Africa, Tanzania (formerly German East Africa), 1♀ subad. cw 21.8, Stuhlmann coll. (ZSM 1183/1).

Comments. This species is known only from Tanzania.

Potamonautes bottegoi (de Man, 1898)

Potamon (*Potamonautes*) *Bottegoi* de Man, 1898: 262-270, pl. 3; *Potamon* (*Potamonautes*) *bottegoi*, Barnard 1950: 192-193, figs 34f-g; *Potamonautes* (*Obesopotamonautes*) *obesus obesus*, Bott 1955: 257-259, figs 19, 80, pl. XII, figs 2a-d.

Material. East Africa, Mozambique, Quelimane, Zambezia District, 1♂ subad. cw 34.2, Peters coll. (ZSM 1517/1 ex 1200/1, don. ZMB Nr. 1911/4382); Tanzania, Indian Ocean, Pemba Island, 1♀ subad. cw 29.5, 1♂ juv. cw 19.3, Lenz coll. (ZSM 1200/2, don. MLü).

Comments. *Potamonautes bottegoi* is found in Tanzania (Pemba Island), Somalia, and Mozambique. *Potamonautes bottegoi* is close to *P. obesus*. Balss (1929a) regarded *P. bottegoi* as a synonym of *P. obesus*, and Bott (1955) treated *P. bottegoi* as a junior synonym of *Potamonautes* (*Rotundopotamonautes*) *obesus obesus*. The two taxa share the following characters: the dorsal surface of the carapace is smooth and highly vaulted, and the major cheliped of adult males is longer than the carapace width. However, *P. bottegoi* is treated here as a valid species on the basis of the following differences with *P. obesus*: the sidewalls of *P. bottegoi* are divided into four parts by two additional granulated raised lines in the subhepatic and pterygostomial regions; and the sidewalls are heavily granulated, not smooth as in *P. obesus*. Moreover, episternal sutures 4-7 (between sternites 4-7 and episternites 4-7) are all deep and distinct (these same sulci are absent in *P. obesus*), and the first gonopods of the two taxa (shown in Pretzmann 1977) are by no means identical.

Potamonautes dybowskii (Rathbun, 1905)

Potamon (*Potamonautes*) *dybowskii* Rathbun, 1905: 177-178, fig. 44, pl. 15, fig. 3; *Potamonautes dybowskii*, Chace 1942: 187; Capart 1954: 832, figs 14, 25; *Potamonautes* (*Orthopotamonautes*) *dybowskii*, Bott 1955: 276-278, figs 45a,b, pl. 19, figs 2a-d.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Medje north of the Ituri river, southwest of Paulis (=Isiro), 1♂ ad. cw 55.1, 09.1926, H. Schouteden coll. (ZSM 1536/1 ex 1185/1, alte ZSM Nr. 1935, don. MRAC); Buta on the Uele river (formerly the Uelle river), 1♀ ad. cw 47.2

(ovig.), 30.01.1925, H. Schouteden coll. (ZSM 1536/2 ex 1185/3, alte ZSM Nr. 1935, don. MRAC); Aruwimi river, 1♀ subad. cw 47.5, Schubotz coll. (ZSM 1536/3 ex 1185/4, alte ZSM Nr. 1911/4381, exchange: ZMB).

Comments. This species is found in Central Africa in the upper reaches of the Zaire (Congo) river and in the Uele river.

Potamonautes ecorseii (Marchand, 1902)

Potamon (*Potamonautes*) *Ecorseii* Marchand, 1902: 334-342, pl. 13, figs 2-6; *Potamon nigrensis* Capart, 1954: 833, figs 8, 20; *Potamonautes* (*Platypotamonautes*) *ecorseii*, Bott 1955: 236-237, figs 13, 67, pl. 6, figs 2a-d; 1959: 1001-1002, figs 9a-c; Monod 1969: 78-79, figs 4-7; 1977: 1212-1213, figs 71-82, 86-92; 1980: 382-383, pl. 6, fig. 32.

Material. West Africa, Togo, near the border with Ghana, Ege river, tributary of the Todje (= Todji) river, near Ho (Ghana), 1♀ juv. cw 15, Schröder coll. (ZSM 1187/1).- Cameroon (=Togo?), Moba, 1♂ cw 30, Thierry coll. (ZSM 1187/2, don. ZMB).

Comments. The complete synonymy is provided by Bott (1955). *Potamonautes ecorseii* is found only in the rivers of West Africa, notably the Niger and the Volta, and in the rivers of Togo.

Potamonautes emini (Hilgendorf, 1892)

Thelphusa emini Hilgendorf, 1892: 11; *Potamon emini*, Chace 1942: 193; Capart 1954: 832, figs 19, 32; *Potamonautes* (*Rotundopotamonautes*) *emini emini*, Bott 1955: 290-291, pl. 24, figs 1a-d, fig. 54.

Material. East Africa, Uganda (formerly British East Africa) Ruwenzori Mountains, between Lake Edward and Lake Albert, 1800m, 1♂ cw 17.1 (ovig.), 1♀ cw 13.3 (ZSM 1188/2). Rwanda (formerly the Belgian Congo, and before that German East Africa), Ruhengeri, northeast of Lake Kivu (formerly Lake Kiwu), 1♀ ad. cw 15.7 (ovig.), 1♀ juv. cw 12.2, 1933, F. Colback coll. (ZSM 1188/1); Lake Kivu (formerly Lake Kiwu), 2♂♂ cws 16.3, 12.9 (ZSM 1188/3); Lake Kivu (formerly Lake Kiwu), 2♀♀ ad. cws 22.4, 16.9 (ovig.) (ZSM 1188/4); Lake Muhazi (formerly Lake Mohasi), northeast of Kigali, 1♂ ad. cw 24.9, Herzog Adolf F. von Mecklenburg coll. (ZSM 1188/5, don. MLü 1116/245); east of Ruhengeri, Lake Luhondo, 9 m ads., 9♀♀ ads., 01-02.02.1934, F. Colback coll. (ZSM 1188/6).

Comments. The lectotype of *Thelphusa emini* is a male (ZMB #8406) from the bay of Bukoba, on the west coast of Lake Victoria in western Tanzania, East Africa. Bott (1955) synonymized *P. emini* with *Potamon mutandensis* Chace, 1953 from lake Mutanda, Uganda. However, comparison of the type of *P. mutandensis* with illustrations of the carapace and gonopod 1 of *P. emini* in Bott (1955) and Capart (1954) raises doubts about the validity of Bott's (1955) synonymy, which is not accepted here. *Potamonautes emini* can be recognised by the lack of sternal sulcus 2 between sternites 2 and 3, by a weak, faint postfrontal crest, by a faint vertical sulcus on the ischium of the third maxilliped, and by the lack of an epibranchial tooth on the anterolateral margin of the carapace. This species reaches maturity between cw 30 and cw 45.

Potamonautes gerdalensis Bott, 1955

Potamonautes (*Gerdalopotamonautes*) *gerdalensis* Bott, 1955: 261-262, figs 34, 82, pl. 13, figs 3a-d.

Material. East Africa, Tanzania (formerly German East Africa), Gerdalo (Girdalo), Ruwana-Steppe (probably in the region of Tabora) (there is a Ruwana river, that flows into Lake Victoria at the Speke Gulf), Holotype, 1♂ ad. cw 34, Paratypes, 1♀ ad. cw 29.3, 1 juv. cw 22.1, 27.01.1911, Kattwinkel coll. (ZSM 1189/1).

Comments. This species was identified by Balss (1914a) as *Potamon* (*Potamonautes*) *reichardi* Hilgendorf (1898). Bott (1955) considered that this material belonged to a new taxon and established a new subgenus to accommodate it, identifying these specimens as *Potamonautes* (*Gerdalopotamonautes*) *gerdalensis* Bott, 1955. This species is known only from the type material.

Potamonautes ignestii (Parisi, 1923)

Thelphusa (*Geotelphusa ignestii* Parisi, 1923: 332-334, pl. 8, fig. 1; *Potamonautes* (*Rotundopotamonautes*) *berardi ignestii*, Bott 1955: 289-290, pl. 23, figs 2a-d.

Material. Northeast Africa, Ethiopia (formerly Abyssinia), Gondar (=Gonder), north of Lake Tana, Caba river, 1♂ ad. cw 39.3, 2♀♀ subads. cws 33.1, 30.8 (ZSM 1182/1).

Comments. *Potamonautes ignestii* is a medium sized species, adult at around cw 35, and this, together with the form of gonopod 1 help to distinguish it from similar, but smaller, species such as *P. berardi*, *P. emini* and *P. neumanni*.

Potamonautes johnstoni (Miers, 1885)

Thelphusa depressa Krauss, var. *Johnstoni* Miers, 1885: 237-239; *Potamon* (*Potamonautes*) *johnstoni*, Balss 1929a: 343-344; *Potamon johnstoni*, Chace 1942: 187; Capart 1954: 832, figs 14, 25; *Potamonautes* (*Lirrangopotamonautes*) *johnstoni johnstoni*, Bott 1955: 265-266, figs 36a,b, pl. 15, figs 2a-d.

Material. East Africa, Kenya (formerly British East Africa), Kibwezi, northeast of Kilimanjaro, 4000m, 1♀ ad. cw 53.4, 1♂, 2♀♀ subad. cw 29.8 (ZSM 1192/6). East Africa, Tanzania (formerly German East Africa), Lindi, about 180 km up country, 1♀ ad. cw 44.23 (ovig.), Ertl coll. (ZSM 1192/3); Kahe, Kahe rivulet, near Moshi, south of Kilimanjaro, 1♀ ad. cw 56.6, 1♂, 2♀♀ subad. cw 29.8, O. Neumann coll. (ZSM 1192/7, don. ZMB Nr. 11374); 1♀ ad. cw 50.5, von Reitzenstein coll. (ZSM 1192/5); Usa river, Usa, east of Arusha (freshwater), 3♂♂ subad. cws 34.4, 30.7, 25.1, 06.11.1959 (ZSM 1192/9); Kibosho (formerly Kiboscho) near Moshi, south of Mount Kilimanjaro, 1♂ ad. cw 58.4, 1♂ subad. cw 48.6, 2♀♀ ad. cws 59.7, 51.3, 2♂♂ subad. cws 36.6, 42.2, 1♂ juv. cw 31, 01.1895, O. Neumann coll. (ZSM 1192/12, don. ZMB); (formerly Matumbi-caves, Nduci (Nduli?)-caves, 800m, 1♀ subad. cw 40.7, 16.03.1905. Methner coll. (ZSM 1192/13, ex 1191/1, don. ZMB); Amani, between Korogwe and Tanga, 1♀ ad. cw 74.5 (ovig. egg diameter 1.93), 1♂, 2♀♀ juvs. cws 29.5, 27.1, 23, Vosseler coll. (ZSM 1192/14 ex 1191/2); Marangu, near Moshi, southeast of Mount Kilimanjaro, 1♀ ad. cw 52.7 (ovig.), 1♂ ad. cw 50.7, 04?.10.1952, N. Pavlitzki coll. (ZSM 1192/15 ex 1191/3). East Africa, Zanzibar Island?, Taita? (in Kenya (formerly British East Africa) there is an area and a mountain range named Taita, near Voi), 1♂ subad. cw 33.2, Hildebrandt (ZSM 1192/4, don. ZMB 1911/4380). East Africa, Malawi (formerly Nyasaland, British Central Africa), Blantyre, 1♀ ad. cw 56.1, 1908 (ZSM 1192/8, don. MLü Nr. 895/245). Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Avakubi, on the Ituri river, northeast of Kisangani (formerly Stanleyville), 1♂ ad. cw 49.3, Herzog Adolf F. von Mecklenburg coll. (ZSM 1192/10 don. MLü Nr. 1127/245).

Comments. Most of the above localities are in Tanzania, and many are in the region around Mount Kilimanjaro. Other localities (Zanzibar, Malawi and Zaire) indicate that this species occupies a wide area of Central Africa.

Bott (1955) synonymized this species with seven published taxa. However, examination of the type material of some (but not all) of the synonymized taxa here raises doubts about the validity of Bott's (1955) synonymy which is not accepted. The specimens in the ZSM correspond well to Miers' (1885) male type specimen of *Thelphusa depressa* var. *johnstoni* from Kilimanjaro (Tanzania) held in the NHML. The specimens in the ZSM from Tanzania and Zaire are not similar to the male type of *Potamon* (*Potamonautes*) *johnstoni* from Ruwenzori, Uganda (NHML 1906.6.11.6-7). *Potamonautes johnstoni* can be recognised by the following characters: the suborbital margins and the anterolateral margins of the carapace have small low teeth, the epibranchial tooth is small but distinct, the exorbital angle tooth is pointed, the vertical sulcus on the sidewalls in the subhepatic region is distinct and granular, episternal sulci 4-7 are all clearly marked, there is a distinct vertical sulcus on the ischium of the third maxilliped, and there is no raised longitudinal crest running along the centre of the terminal segment of gonopod 1.

Potamonautes langi (Rathbun, 1921)

Potamon (*Potamonautes*) *langi* Rathbun, 1921: 430-433, pl. 32, fig. 14; *Potamonautes* (*Obesopotamonautes*) *langi*, Bott 1955: 256-257, figs 17,18, 79a,b, pl. 12, figs 1a-d.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Nyonga? (probably Katanga District, Lake Upemba, east of Kamina), 1♀ ad. cw 43.1, 1♂ subad. cw 37, 01-07.05.1925, G. F. de Witte coll. (ZSM 1193/1, alte ZSM Nr. 1935, don. MRAC).

Comments. This species inhabits the rivers of the Congo river basin and is distinguished by a distinct anterolateral margin of carapace which has several long and pointed teeth.

Potamonautes lirrangensis (Rathbun, 1904)

Potamon (*Potamonautes*) *lirrangensis* Rathbun, 1904: ???, pl. 14, fig. 8; 1905: 169; *Potamon lirrangensis*, Chace 1942: 188, figs 1, 2; Capart 1954: 836, fig. 28; *Potamonautes* (*Lirrangopotamonautes*) *lirrangensis*, Bott 1955: 268-270, figs 38, 39, 83, pl. 16, figs 2a-d.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Kisangani (formerly Stanleyville), 1♂ ad. cw 51.2, 1930, Richard coll. (ZSM 1194/1, alte ZSM Nr. 1935, don. MRAC); Lukolela, near Liranga (formerly Lirringa)) on the Congo river, 1♀ subad. cw 48.8, 1♂ subad. 41.5, 1924, Ghesquère coll. (ZSM 1194/2). East Africa, Tanzania (formerly German East Africa), Lake Nyasa (formerly Lake Njassa), Tukuyu (formerly Neu-Langenburg), south of Mbeya, 1♂ ad. cw 57.3, 2♀ ad. cws 55.6, 53.1, 1♂ subad. cw 39.4, 1♀ subad. cw 31.5, Fülleborn coll. (ZSM 1194/3, don. MRAC 1935).

Comments. This species is known from the upper reaches of the Congo river, from Tanzania and from Lake Malawi.

Potamonautes loveni (Colosi, 1924)

Potamon (*Potamonautes*) *loveni* Colosi, 1924: 13-15, fig. 9, pl. 1 (4); *Potamon* (*Potamonautes*) *granviki* Colosi, 1924: 16-19, fig. 11, pl. 1 (5); *Potamonautes* (*Rotundopotamonautes*) *granviki*, Bott 1955: 286-288, pl. XII, figs 2a-d, figs 52, 90.

Material. East Africa, Uganda near the border with Kenya (formerly British East Africa), Mount Elgon, Bishugu? (probably Bugisu Province near Mbale), 1♂ cw 30.8, Koniecki coll. (ZSM 1519/1 ex 1190/1).

Comments. Bott (1955) synonymized this species with six published taxa. However, comparison of the ZSM specimens with the type material of some of the synonymized taxa raises doubts about the validity of all of Bott's (1955) synonymy, which is not accepted here. It is likely that *Potamon* (*Potamonautes*) *granviki* and *Potamon* (*Potamonautes*) *loveni* are synonyms. This opinion agrees with that of Williams (1991) who provides detailed arguments for the recognition of this taxon as *P. loveni*.

Potamonautes loveridgei (Rathbun, 1933)

Potamon (*Potamonautes*) *loveridgei* Rathbun, 1933: 251-253, pl. 1, pl. 2, fig. 3; *Potamon* (*Potamonautes*) *johnstoni stappersi*, Balss 1936: 182, 184, fig. 19; *Potamonautes* (*Tripotamonautes*) *loveridgei*, Bott 1955: 263, fig. 31, pl. 14, figs 1a-d.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Kasiki, near Pepa, Marungu Mountains, west of Lake Tanganyika, 1♂ ad. cw 33, 27.06.1931, G. F. de Witte coll. (ZSM 1195/1, alte ZSM Nr. 1935, don. MRAC); formerly Mwerasi river, Lake Tanganyika (probably in the region of Beaudoinville and Moba), 2♂♂ ad. cws 32, 30.3, 10.11.1912, L. Stappers coll. (ZSM 1195/2).

Comments. This species inhabits the rivers in the Democratic Republic of the Congo (Zaire) that flow into the western shores of Lake Tanganyika, and from the rivers in Tanzania that flow into the eastern shores of Lake Tanganyika. Balss (1936) identified these specimens as *Potamon* (*Potamonautes*) *johnstoni stappersi* and illustrated the unusual and distinctive first gonopod.

Potamonautes margaritarius (A. Milne-Edwards, 1869)

Thelphusa margaritaria A. Milne-Edwards, 1869: 185, pl. 9, figs 4, 4a, 4b; *Potamon margaritarius*, Chace 1942: 216; Capart 1954: 838; *Potamonautes* (*Platypotamonautes*) *margaritarius*, Bott 1955: 229-230, 235, fig. 11, pl. 30, figs 1a-d.

Material. Atlantic Ocean, Gulf of Guinea, São Tomé Island (formerly São Thome), Combra? 1♂ ad., 12.1883, R. Greef coll. (ZSM 1196/1).

Comments. This species is restricted to the island of São Tomé and is the only species of freshwater crab found on that island.

Potamonautes neumanni (Hilgendorf, 1898)

Thelphusa neumanni Hilgendorf, 1898: 18-19, pl. 1, fig. 1; *Potamon neumanni*, Chace 1942: 217; Capart 1954: 839, figs 30, 33; *Potamonautes (Platypotamonautes) neumanni*, Bott 1955: 238-239, pl. V, figs 2a-d, figs 14, 69.

Material. East Africa, Kenya (formerly British East Africa), formerly Ngare Longai (river?), Massailand, near Nairobi (36°E, 1.5°S), Paratype, 1♂ juv. cw 18.4 (ZSM 1198/1). East Africa, probably Kenya (formerly British East Africa), 1♂ ad. cw 33.8, 1♀ ad. cw 34, O. Neumann coll. (ZSM 1198/2 ex 1197/1).

Comments. The lectotype of *Thelphusa neumanni* is a male (ZMB #11386) from Ngare Longai, Masailand 36°E 1.5°S, East Africa. Bott (1955) synonymized this species with *Potamon jeanneli* Bouvier, 1921. However, comparison of the type of *P. jeanneli* with the lectotype of *P. neumanni* raises doubts about the validity of Bott's (1955) synonymy, which is not accepted here. *Potamonautes neumanni* can be recognised as follows. There is no visible episternal sulcus between sternite 4 and episternite 4, and the ischium of the third maxilliped lacks a vertical sulcus. The medial and lateral folds on the terminal segment of gonopod 1 are of equal size and there is a large rounded shoulder on the medial margin of the subterminal segment close to the junction between the segments. *Potamonautes neumanni* from East Africa is a small species, reaching maturity at cw 24.

Potamonautes niloticus (H. Milne Edwards, 1837)

Thelphusa nilotica A. Milne-Edwards, 1837: 12; *Potamon niloticus*, Chace 1942: 218; Capart 1954: 841, figs 16, 35; *Potamonautes (Acanthothelphusa) niloticus*, Bott 1955: 260, pl. 13, figs 1a-c, 30a-b; Pretzmann 1962: 305-306; Monod 1980: 382-383, pl. IV, fig. 22.

Material. East Africa, Tanzania (formerly German East Africa) formerly Karagata, 1♀ subad. cw 38.7, 1♂ juv. cw 326.3, Conrads coll. (ZSM 1199/1 don. ZMB). Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Katanga District, Lake Upemba, east of Kamina, Nyonga?, 2♀♀ ad. cws 43.3, 40.8, 01-07.05.1925, G. F. de Witte coll. (ZSM 1199/2).

Comments. The complete synonymy is provided by Bott (1955). This species is easily recognised by the complete postfrontal crest and by the series of sharp spines on the anterolateral margins of the carapace. *Potamonautes niloticus* is found throughout the entire length of the Nile, from Cairo to Lake Victoria and its tributaries, and in the eastern part of the Democratic Republic of the Congo (Zaire).

Potamonautes obesus (A Milne-Edwards, 1868)

Thelphusa obesa A. Milne-Edwards, 1868: 86, pl. 20, figs 1-4; *Potamon (Potamonautes) calcaratus* Gordon, 1929: 405-411, figs 1-4, 5a; Barnard 1950: 193-194, figs 34h,i, 35d; *Potamon calcaratus*, Chace 1942: 208; *Potamonautes (Obesopotamonautes) obesus calcaratus*, Bott 1955: 259-260, figs 15, 81; *Potamonautes (Obesopotamonautes) obesus obesus*, Bott 1955: 257-259, figs 19, 80, pl. 12, figs 2a-d.

Material. East Africa, Tanzania (formerly German East Africa), stream near Saggo-Nganga? Nyanga?, Njanga?, 1♀ ad. cw 36.8 (ovig.), 1♀ subad. cw 33.1, Fülleborn coll. (ZSM 1518/1 ex 1200/3); East Africa, 1♀ ad. cw 35.5, 1♀ subad. cw 25.8 (ZSM 1518/2 ex 1200/4, don. MLü 1113/245); Tendaguru, water hole, 1♀ ad. cw 52.2, Reck coll. (ZSM 1518/4 ex 1200/6); East Africa, Kilwa (probably Tanzania, formerly German East Africa), Kilwa (Kivinje?), 1♀ ad. cw 47.8 (ovig.), Eimer coll. (ZSM 1518/3 ex 1200/5); Southern Africa, Mozambique (formerly Portuguese East Africa), Charre, north of Sena (=Vila de Sena) on the Zambezi river, Paratype, 1♀ subad. cw 25.5, Cott coll. (ZSM 1518/6 ex 1201/1, don. NHML Nr. 1933); Southern Africa, probably Mozambique, 1♀ ad. cw 40.3, 1♂ ad. cw 42.9 (ZSM 1518/5 ex 1200/7).

Comments. *Potamonautes obesus* and *P. calcaratus* share a number of characters and are considered here to belong to the same species. The sidewalls are divided into two parts and are smooth; there is no vertical groove on the ischium of the third maxilliped, and the male abdomen is a broad triangle. The

first gonopods of the two taxa (shown in Pretzmann 1977) are somewhat similar. There are, however a number of minor difference between these two taxa, which may be attributed to the isolation of the northern and southern populations in Somalia and Mozambique respectively.

***Potamonautes paecilei* (A. Milne-Edwards, 1886)**

Thelphusa Paecilei A. Milne-Edwards, 1886: 149; *Potamon paecilei*, Chace 1942: 218; Capart 1954: 841-842, figs 34, 37; *Potamonautes (Longipotamonautes) paecilei*, Bott 1955: 242-243, figs 21, 71, pl. 6, figs 2a-d.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Equateur Province, Binga, Mongala river (right tributary of the Congo river), 1♂, van den Put coll. (ZSM 1202/1, alte ZSM Nr. 1935, don. MRAC).

Comments. The complete synonymy is provided by Bott (1955). *Potamonautes paecilei* is found in the rain forest zone from Nigeria to lower Zaire. This species was listed by Balss (1936) as *Potamon (Potamonautes) campi* but these specimens are judged here to belong to *P. paecilei*.

***Potamonautes perlatus* (H. Milne Edwards, 1837)**

Thelphusa perlata A. Milne-Edwards, 1837: 13; *Potamon perlatus*, Chace 1942: 219; Capart 1954: 842, figs 18, 38; *Potamon (Potamonautes) perlatus*, Barnard 1950: 183-187, figs 34a, 35a-c; *Potamonautes (Potamonautes) perlatus perlatus*, Bott 1955: 254, pl. 11, figs 2a-c, 3, fig. 26.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), Kinda south of Kamina, Katanga District, 1♂ ad. cw 48.5, Charliers coll. (ZSM 1203/1); Kapiri river, tributary of the Lufira river, in the region of Likasi (formerly Jadotville), Katanga District, 1♂ ad. cw 46.9, G. F. de Witte coll. (ZSM 1203/2, alte ZSM Nr. 1935, don. MRAC). Southwest Africa, Namibia (formerly German Südwestafrika) Swakopmund, 1♂ cw 43.8, 1901, Bürkel coll. (ZSM 1203/3); Windhoek (formerly Windhuk), "aus einem Quellbach im Truppengarten, angeblich hier eingesetzt, aus anderem Gewässer des Schutzgebietes stammend" (Balss, 1922), 1♂ ad. cw 49.43, 1♀ subad. cw 44.2, 03.05.1911, W. Michaelsen coll. (ZSM 1203/4). South Africa (formerly Kapland), Port Elisabeth, Kap der Guten Hoffnung (=Cape of Good Hope), "Bach in der Nähe des Kaffernkrals" nach Doflein (1904), 1♂ juv. cw 24.6, 1904; Natal is not correct), 1898-1899, "Valdivia" – Expedition coll. (ZSM 1203/5); Kaapstad (=Cape Town) (formerly Kapstadt), Kap der Guten Hoffnung (=Cape of Good Hope), 1♂ ad. cw 54.2, Roemer (ZSM 1203/6); Natal Province, 1♀ ad. cw 70.6 (hatchlings cw 2.78), 1909, Langenheim (ZSM 1203/7).

Comments. This species is found in the southern part of Central Africa (in the south eastern region of the Democratic republic of the Congo) and in southern Africa (Namibia and South Africa).

***Potamonautes perparvus* (Rathbun, 1921)**

Potamon (Geothelphusa) perparvus Rathbun, 1921: 425-427, fig. 12, pl. 28, fig. 2, pl. 30, figs 1-3; *Potamonautes (Lobopotamonautes) perparvus perparvus*, Bott 1955: 283-284, fig. 47, pl. 21, figs 1a-d.

Material. East Africa, Rwanda, SW-Ruanda, Rukarara river, southeast of Lake Kivu, 1♀ subad. cw 14.4), 8.1907 (ZSM 1204/1).

Comments. *Potamonautes perparvus* can be recognised by a faint postfrontal crest, a low exorbital angle, and a low or absent epibranchial tooth; both of the latter two features are continuous with the anterolateral margin.

***Potamonautes platynotus* (Cunnington, 1907)**

Potamon (Potamonautes) platynotus Cunnington, 1907: 264-266, pl. 17, figs 1-2; *Potamonautes (Platypotamonautes) platynotus*, Bott 1955: 235-236, 235, fig. 12, 66, pl. 4, figs 1a-d.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), formerly Rutuku-Ganja, south of Kalemie (formerly Albertville) western shore of Lake Tanganyika, 1♀ ad. cw 50.2 (ovig. eggs 1.27 diameter), L. Stappers coll. (ZSM 1205/1 alte ZSM Nr. 1935, don. MRAC); western shore of Lake Tanganyika, 3♂♂ juvs. cws 29.4, 19.2, 14.9, L. Stappers (or Glauning) coll. (ZSM 1205/2); Mondombe, near Ikela, forest of Mondombe, forest stream, 1♂ juv., 11.1922 (ZSM 1205/3).

Comments. This species is endemic to Lake Tanganyika.

Potamonautes sidneyi (Rathbun, 1904)

Potamon (*Potamonautes*) *Sidneyi* Rathbun, 1904: ???, pl. 14, fig. 3; 1905: 165; *Potamon* (*Potamonautes*) *sidneyi*, Barnard 1950: 189, fig. 34b; *Potamonautes* (*Orthopotamonautes*) *sidneyi*, Bott 1955: 278-279, 235, fig. 46, pl. XX, figs 1a-d.

Material. South Africa, Zululand-District, Lake Sibayi, 1♂ ad. cw 44.6, 1♀ subad. cw 35.9 (ZSM 1206/1, don. MLü 1114/245, Museum Gothenburg).

Comments. *Potamonautes sidneyi* is a large species that resembles *P. perlatus* in some respects but the first gonopod of each of these species is different. *Potamonautes sidneyi* is restricted to Natal province of South Africa (Barnard, 1950).

Potamonautes suprasulcatus (Hilgendorf, 1898)

Thelphusa suprasulcata Hilgendorf, 1898: 8-9, pl. 5, figs 5, 5a-d; *Potamonautes* (*Arcopotamonautes*) *suprasulcatus* *suprasulcatus*, Bott 1955: 270-272, 235, fig. 40, pl. 17, figs 1a-d.

Material. East Africa, Tanzania, Mount Kilimandjaro, 1♂ juv. cw 27.4, 1♀ subad. cw 43, 1952, N. Pavlitzki coll. (ZSM 1207/1); in a river flowing into Lake Manyara, west of Arusha, freshwater, 1♂ ad. cw 57.3, 1♀ ad. cw 49.5, 29.01.1960, J. Popp, coll. (ZSM 1207/2).

Comments. *Potamonautes suprasulcatus* resembles *P. johnstoni* in some respects but the first gonopod of each of these species is very different.

Potamonautes walderi (Colosi, 1924)

Potamon (*Potamonautes*) *Walderi* Colosi, 1924: 8-9, figs 5, 5a, 5b; *Potamonautes* (*Tripotamonautes*) *walderi*, Bott 1955: 264, figs 32, 33, pl. 13 figs 2a-d.

Material. Central Africa, the Democratic Republic of the Congo (formerly Zaire and the Belgian Congo), formerly Kai Bumba, Majumbe-District, Lower Congo river (probably Kai Nduna = Kai Ndunga, Mayumbe-District, between Boma and Tshela, Congo river mouth), 1♂ cw 29.9, 10.10.1920, H. Schouteden coll. (ZSM 1208/1 alte ZSM Nr. 1936, don. MRAC); formerly Kai Bumba, Mayumbe-District, Lower Congo river (probably Kai Nduna = Kai Ndunga, Mayumbe-District, between Boma and Tshela, Congo river mouth), 1♂ ad. cw 28.4, 1♂ juv. cw 22.5, 10.1920, H. Schouteden coll. (ZSM 1208/2 ex 1185/2).

Comments. The complete synonymy is provided by Bott (1955). *Potamonautes walderi* is recognised by a distinct gonopod 1 whose terminal segment has a large medial fold, about twice as high as the lateral fold. *Potamonautes walderi* is found in the rivers of the lower Congo river basin.

Liberonautes Bott, 1955

Liberonautes Bott, 1955: 306.

Liberonautes latidactylus (de Man, 1903)

Potamon (*Potamonautes*) *latidactylum* de Man, 1903: 41-47, pl. 9, figs 1-6; *Liberonautes latidactylus*, Bott 1955: 306-308, pl. 29, figs 102, 103; *Liberonautes latidactylus latidactylus*, Cumberlidge & Sachs 1989a: 221-230: figs 1, 2; 1989b: 425-439: fig. 1, tab. 1.

Material. West Africa, Liberia, Fulba? 1♂ juv. cw 20, 1♀ juv. cw 33, 08.1908, Scherer (ZSM 1527/1 ex 1174/1); formerly Millsburg, St. Paul river near Monrovia, 2♂♂ juvs. cws 14, 11, Scherer coll. (ZSM 1527/2 ex 1174/3); 3♀ adults cws 58, 50, 62 (hatchlings), 1♀ subad. cw 46, 3♂♂ subads. cws 50, 42, 48, Scherer coll. (ZSM 1527/3 ex 1174/4).

Comments. *Liberonautes latidactylus* is the commonest freshwater crab in the West African region west of Ghana. These localities fall within the known range of this species (Cumberlidge 1998).

Sudanonautes Bott, 1955

Sudanonautes Bott, 1955: 295-296.

Sudanonautes aubryi (H. Milne Edwards, 1853)

Thelphusa aubryi H. Milne Edwards, 1853: 210; *Sudanonautes aubryi*, Cumberlidge 1994b: 225-241.

Material. West Africa, Togo, 1♂ adult, cw 65 (with *S. granulatus*), 02.1905, Graf Zech coll. (ZSM 1525/6 ex 1214/9); Sokodé, flowing water, 2♂♂ subads. cws 40, 37, 7 juvs., cws 12.5-29, Schröder coll. (ZSM 1525/7 ex 1214/2, don. ZMB 1928); Misahöhe, near Palimé, north of Klouto, 1♂ cw 26 (caught together with six *S. granulatus*) Baumann coll. (ZSM 1525/8 ex 1214/8, don. ZMB 1928); formerly Bismarckburg, near Blitta, 1♀ adult cw 73, 02.1905, Büttner coll. (ZSM 1525/9 ex 1214/10, don. ZMB 1928). Central Africa, Cameroon, Yaounde, 1♀ adult cw 56 (ovig.), von Carnap coll. (ZSM 1525/4 ex 1214/5); Bipindi, near the Lokoundié river, northwest of Ebolowa, 1♂ adult cw 51 (together with *S. granulatus*), Zenker coll. (ZSM 1525/5 ex 1214/3, don. ZMB 1928); Barombi station by Barombi lake, near Kumba, formerly Johann-Albrechtshöhe, north of Mount Cameroon, captured in rice field, 1♀ adult cw 51, 1♀ subad. cw 34, Preuss coll. (ZSM 1525/1 ex 1214/4), don. ZMB, 1928); Victoria (= Limbé) south of Mount Cameroon, 1♀ subad. cw 36, 06.10.1912, E. Fickendey coll. (ZSM 1525/3 ex 1214/6 don. Mus. Hamburg); 1♀ subad. cw 38, 1 juv. damaged, 1908, Haberer coll. (ZSM 1525/2 ex 1214/7).

Comments. The genus *Sudanonautes* occurs in West and Central Africa and includes 10 species (Cumberlidge 1991, 1993a,b, 1994b, 1995a-d, 1998). Seven species of this genus are represented in the collection, four from Cameroon, one from Nigeria, and one from the Republic of the Congo. *Sudanonautes aubryi* is a large species that is widespread and common in West and Central Africa. However, for a long time this species had been confused with other superficially similar species found in the same region. Details of the complete synonymy, identification, distribution and ecology of *S. aubryi* are provided in the redescription by Cumberlidge (1994b).

Sudanonautes africanus (A. Milne-Edwards, 1869)

Thelphusa africana A. Milne-Edwards, 1869: 186, pl. 11, figs 2, 2a; *Sudanonautes africanus*, Cumberlidge 1995a: 588-598, figs 1-3, tab. 1.

Material. Central Africa, Cameroon, Yaounde, 1 juv. cw 18, Zenker coll. (ZSM 1209/1, donated by MRAC 19357); Barombi station by Barombi lake near Kumba, formerly Johann-Albrechtshöhe, north of Mount Cameroon, 2♀♀ subads. cw 57, 49, Preuss coll. (ZSM 1209/2, exchange ZMB 1911/4379). Zaire, Lower Congo, Kidada near Kitobola, river Lukunga, lower Congo river, southwest of Thysville, 1 juv. cw 28, 15.02.1922, Schouteden coll. (ZSM 1209/3, alte ZMS Nr. 1935, don. MRAC 1935); formerly Kai Bumba, Maumbe district, between Boma and

Tshela, lower Congo river, tributary of the river Chilongo, 1♂ subad. cw 39, 10.10.1920, Schouteden coll. (ZSM 1209/4, alte ZSM Nr. 1935, don. MRAC 1935). Africa, 1 ??? subad. cw 69 (ZSM 1209/5).

Comments. This large species is abundant in Central Africa and in the rain forest regions of southeast Nigeria. Like *S. aubryi*, the identification of *S. africanus* has often proved difficult due to its confusion in the literature with other similar-looking species found in the same region. Details of the complete synonymy, identification, distribution and ecology of this species are provided in the redescription by Cumberlidge (1995a).

Sudanonautes chavanesii (A. Milne-Edwards, 1886)

Thelphusa Chavanesii A. milne-Edwards, 1886: 150; *Sudanonautes chavanesii*, Cumberlidge 1995b: 238-246, figs 1-3.

Material. Central Africa, Cameroon, Boedou, near Banyo, 1♀ subad. cw 47, 1♂ adult cw 49, Riggenbach coll. (ZSM 1526/1 ex 1210/1, alte ZSM Nr. 1928, don. ZMB 1928); Foumban, vicinity of Dschang, 1♂ subad. cw 47, 1♂ juv. cw 28, Th. Monod coll. (ZSM 1526/2 ex 1210/2 alte ZSM Nr. 1928, don. MNHN).

Comments. *Sudanonautes chavanesii* was recently redescribed by Cumberlidge (1995b, 1998) who provided details of the complete synonymy, identification, distribution and ecology of this species.

Sudanonautes floweri (de Man, 1901)

Potamon (Potamonautes) Floweri de Man, 1901: 94-101, pl. 10; *Sudanonautes floweri*, Cumberlidge 1995d: 111-119, figs 1-3, tab. 1.

Material: Central Africa, Cameroon, 1♀ subad. cw 28; 1♀ subad. cw 28 (ZSM 1524/6 ex 1174/2); Victoria (= Limbé), 1♀ subad. cw 33, 1898-1899, "Valdivia" coll. (ZSM 1524/4 ex 1211/2); Bibundi, west of Mount Cameroon, 2♂♂ adults cws 46, 45, 1♀ adult cw 38, 1♀ subad. cw 30, 1♂ juv. cw 32, Retzlaff coll. (ZSM 1524/5 ex 1211/3). Zaire, Bambesa, Upper Uele river, 2♂♂ adults cws 46, 45, 2♀♀ adults, cws 42, 38, 2♂♂ juvs. cws 32, 22, 14 10.1933, H. J. Bredo coll. (ZSM 1524/1 ex 1212/1 alte ZSM Nr. 1935/1, don. MRAC 1935/1); Monbuttu? (near the upper Uele) between Kibali and the Ituri river, west of Lake Albert southeast of the river Uele, 1♀ subad. cw 29, Schweinfurth coll. (ZSM 1524/2 ex 1212/2); Monbuttu? (near the upper Uele) between Kibali and the Ituri river, west of Lake Albert southeast of the river Uele, 1♀ subad. cw 34, Schweinfurth coll. (ZSM 1524/3 ex 1211/1, alte ZSM Nr. 1928, don. ZMB, 1928).

Comments. *Sudanonautes floweri* is a widespread species found in savanna regions from Nigeria to Sudan, and in rain forest regions from Nigeria to Zaire. This species was recently redescribed by Cumberlidge (1995d, 1998), who provided details of the complete synonymy, identification, distribution and ecology of this species.

Sudanonautes faradjensis (Rathbun, 1921)

Potamon (Acanithothelphusa) faradjensis Rathbun, 1921: 428-430, pl. 31, fig. 13; *Sudanonautes faradjensis*, Cumberlidge 1995c: 629-636, figs 1-3.

Material. Central Africa, Cameroon, Bipindihof, Zenker, 1♂ adult cw 34, 2♀♀ adults cws 34, 33.8 (ZMB 10359); Boedou, subdivision of Banyo, stream, 1♂, 1♀, Riggenbach coll. (ZSM 1526/1 ex 1210/1 alte ZSM Nr. 1928, don. ZMB); Foumban, Dschang district, 1♂, Th. Monod coll. (ZSM 1526/2 ex 1210/2, alte ZSM Nr. 1928, don. MNHN).

Comments. This species was recently redescribed by Cumberlidge (1995c, 1998) who provided details of the complete synonymy, identification, distribution and ecology of this species. This large species is restricted to the rivers of the rain forest region of Central Africa between Cameroon and lower Congo.

Sudanonautes monodi (Balss, 1929a)

Potamonantes aubryi monodi Balss, 1929a: 123, fig. 4 (Laro); *Potamon monodi*, Chace 1942: 217; Capart 1954: 823, figs 9, 29; *Sudanonautes* (*Convexonautes*) *aubryi monodi*, Bott 1955: 306, fig. 101; Monod 1977: 1281, figs 108-109; 1980: 385.

Material. Central Africa – Cameroon, north Cameroon, Laro, by the river Deo, 2♂♂ adults cws 43, 40, syntypes, 1929a, Th. Monod coll. (ZSM 1213/1).

Comments. *Sudanonautes monodi* is restricted to the drier parts of the savanna from Togo to Chad. These specimens from Garoua in northern Cameroon are close to the type locality (Maroua near Garoua). This species was considered by Bott (1955) and Monod (1977, 1980) to be a subspecies of *S. aubryi*. Cumberlidge (1994b, 1995d, 1998) recently redescribed *S. aubryi* and *S. floweri* and recognised *S. monodi* as a valid species.

Sudanonautes granulatus (Balss, 1929a)

Potamonantes decazei granulata Balss, 1929a: 119; *Sudanonautes granulatus*, Cumberlidge 1993c: 805-816, figs 1a-d, 2a-d, 3a-m, 4a-j, 6a-b, 7.

Material. West Africa, Togo, Misahöhe, near Palimé, north of Klouto, 6♂♂ cw 25-16 (collected with 1♂ *S. aubryi*), Baumann coll. (ZSM 1523/1 ex 1214/8) – Togo, 1♂ adult cw 25 (collected with *S. aubryi*), 02.1905, Graf Zech (ZSM 1523/3 ex 1214/9). Central Africa, Cameroon Bipindi near the Lokoundié river, northwest of Ebolowa, 1♂ adult cw 31, 1♀ adult ovigerous cw 35, 4 subads. cws 25, 15, 12, 9 (collected with *S. aubryi*), Zenker coll. (ZSM 1523/5 ex 1214/3, alte ZSM Nr. 1928, don. ZMB 1928); Bafia near the Mbam river, northwest of Yaounde, 1♂ subad. cw 21, Leiderer coll. (ZSM 1523/4 ex ZSM Ein. Nr. 657).

Comments. *Sudanonautes granulatus* has a disjunct distribution in West Africa, and is found in the rain forest regions of Cameroon, Nigeria and Côte d'Ivoire. This species was recently redescribed by Cumberlidge (1993c, 1998).

Potamonemus Cumberlidge & Clark, 1992

Potamonemus Cumberlidge & Clark, 1992: 149.

Potamonemus mambilorum Cumberlidge & Clark, 1992

Potamonemus mambilorum Cumberlidge & Clark, 1992: 149, figs 1-3, tabs 1-2, pl. 1; Cumberlidge 1993a: 582-584, figs 5e-f, 6g-i, tab. 3.

Material. Cameroon, Fouban, region of Dschang, 2♀♀ adults cw 34, 28, 1♀ subad. cw 22.5, Th. Monod coll. (ZSM 1520/1 ex 1176/1, alte ZSM Nr. 1928/4, don. MNHN).

Comments. There are three species in this genus (Cumberlidge & Clark 1992, Cumberlidge 1993b); two of them are represented in the collection of the ZSM. *Potamonemus mambilorum* is found only in southwest Cameroon.

Potamonemus sachsi Cumberlidge, 1993b

Potamonemus sachsi Cumberlidge, 1993b: 571-576, figs 1, 2, 5c-d, 6d-f, 7; tabs 1, 3.

Material: Central Africa, Cameroon, Bura, 1♀ adult cw 22, Bigge coll. (ZSM 1521/1 ex 1176/3).

Comments. This species has a disjunct distribution and is found in southwest Cameroon, Nigeria and Togo.

Louisea Cumberlidge, 1994a

Globoneutes Bott, 1959: 999; *Louisea* Cumberlidge, 1994a: 124-125.

Louisea edeaensis (Bott, 1969)

Globonautes macropus edeaensis Bott, 1969: 360; 1970b: 24, pl. 1, figs 3-5, pl. 26, fig. 8; Cumberlidge 1987: tab. 1; *Louisea edeaensis*, Cumberlidge 1994: 124-125, fig. 1, tab. 1.

Material. Central Africa, Cameroon, Edea, 1♂ adult, cw 22. 52, Holotype, 01.1910 (ZSM 1118/1).

Comments. This species was described by Bott (1969, 1970b) as *Globonautes macropus edeaensis* and was assigned to the Gecarcinucidae. Cumberlidge (1994a) redescribed this taxon as *Louisea edeaensis*, and reassigned it to the Potamonautidae. All known specimens of *L. edeaensis* were collected before 1910, and it is of some concern that this unusual species has not been seen for over 90 years.

Louisea balssi (Bott, 1959)

Geothelphusa macropus Balss, 1914a: 406; 1936: 200 (part.); *Globonautes balssi* Bott, 1959: 999-1000, fig. 7; Cumberlidge 1987: 2210-2212; *Globonautes macropus balssi*, Bott 1969b: 360; 1970b: 24, pl. 1, figs 3-5, pl. 26, fig. 8; *Louisea edeaensis*, Cumberlidge 1994a (part): 127, 130, figs 2, 3, tabs 1, 2.

Material. Cameroon, formerly Esosung, Bakossi region, Kumba (formerly Johann-Albrechtshöhe), 1060m, 1♀ adult cw 21, Carl Rathke coll. (ZSM 1117/1).

Comments. *Louisea balssi* was recently recognised as a valid species by Cumberlidge (1998). Prior to that, *L. balssi* had been considered as either *incertae sedis* (Cumberlidge 1994a) or as a subspecies of *G. macropus* (Bott 1969, 1970b).

Platythelphusa A. Milne-Edwards, 1887

Platythelphusa A. Milne-Edwards, 1887: 146; *Potamonautes (Platythelphusa)*, Bott 1955: 226.

Comments. *Platythelphusa* is treated here as a valid genus, and the subgenus and subspecies categories of Bott (1955) are not recognised. There are at least six species of *Platythelphusa* in Lake Tanganyika (Capart 1952); two of these are represented in the collection of the ZSM.

Platythelphusa armata A. Milne-Edwards, 1887

Platythelphusa armata A. Milne-Edwards, 1887: 147, pl. 9, figs 10-10d; *Platythelphusa armata*, Capart 1952: 44-48, figs 1, 7a, 10; *Potamonautes (Platythelphusa) armata armata*, Bott 1955: 226-227, pl. 2, figs 1a-d, 9a-b.

Material. East Africa, Burundi (formerly German East Africa), Bujumbura (formerly Usumbura), northern part of Lake Tanganyika, 1♀ ad. cw 43.5, Grauer coll. (ZSM 1529/2 ex 1177/2); Tanzania (formerly German East Africa), 1♂ juv. 16.7, L. Stappers coll. (ZSM 1529/1 ex 1177/1).

Comments. Bott (1955) synonymized *P. armata* with *Limnothelphusa maculata* Cunningham, 1899. However, comparison of the type of *P. armata* with Cunningham's type of *L. maculata* indicates that these two taxa do not belong to the same species. It is likely that each is, in fact, a valid species (Capart 1952).

Platythelphusa maculata Cunningham, 1899

Limnothelphusa maculata Cunningham, 1899: 698, pl. 38; Moore 1903: 280; Rathbun 1905: 269; *Platythelphusa maculata*, Cunningham 1907: 271, pl. 5-6; Balss 1936: 196; Chace 1942: 225; Capart 1952: 52-55, figs 5, 6, 7f,g; *Potamonautes (Platythelphusa) armata armata*, Bott 1955: 226-229, figs 9a-b, pl. 2, figs 1a-d.

Material. East Africa, Tanzania (formerly German East Africa), probably Lake Tanganyika, 1♀ ad. cw 15, L. Stappers coll. (ZSM 1530/1 ex 1177/1).

Comments. Bott (1955) followed the opinion of Balss (1936) that *L. maculata* described by Cunnington (1899) was in fact a juvenile form of *P. armata* and treated *P. maculata* as a synonym of *P. armata*. However, the specimens of *P. maculata* reach maturity at an extremely small size (some adults have a cw of only 15), which argues against their inclusion in *P. armata*, where adult animals have a cw of 35-45, and specimens of cw 15 would be juveniles. The specimen of *P. maculata* (ZSM 1530/1) was caught together with specimens of *P. armata* (ZSM 1529), and this material has now been divided into separate lots. *Platythelphusa maculata* is recognised here as a valid species following comparison of the type material of *P. armata* and *P. maculata*.

***Gecarcinautes* Bott, 1960**

Gecarcinautes Bott, 1960: 15; 1965: 336; *Bottia* Pretzmann, 1961: 162 (part).

***Gecarcinautes goudoti* (H. Milne Edwards, 1853)**

Thelphusa Goudoti H. Milne Edwards, 1853: 212; *Gecarcinautes goudoti*, Bott 1965: 338-339, pl. 2, figs 6, 7.

Material. Madagascar, Indian Ocean, Forest, Vallée de la Manambato (valley of Manambato), north of the Tsaratanana Mountains, 1♂ cw 23.6 (ZSM 1532/1 ex 1159/1, don. MNHN Nr. 831); Lake Alaotra, north of Antananarivo (formerly Tananarive), 3♂♂ ads. cw 46.8, 41.4, 32.8, 1♀ ad. 31.2, Voeltzkow coll. (ZSM 1532/2 ex 1159/2, don. MLü Nr. 1121/24); Toamasina (formerly Tamatave), 1♀ subad. cw 20.9, J. Millot coll. (ZSM 1532/3 ex 1162/1, alte ZSM Nr. 1928, don. MNHN Nr. 422).

Comments. The complete synonymy is provided by Bott (1965). *Gecarcinautes goudoti* is recognised as a valid species on the basis of characters of the carapace and gonopod 1. Bott (1965) referred *G. goudoti* to the subfamily Gecarcinucinae in the family Potamonidae. Bott (1969, 1970b) later included the African and Indian species of Gecarcinucinae in the family Gecarcinucidae, but made no mention of the Madagascan fauna. Comparison of the mandibular palp of *G. goudoti* with that of *Hydrothelphusa agilis* and *H. madagascariensis* indicates a close correspondence between all three taxa, and does not appear to warrant the assignment of *G. goudoti* to a different genus, subfamily, and family. A definitive judgement, however, awaits a detailed study of the entire Madagascan freshwater crab fauna.

***Hydrothelphusa* H. Milne-Edwards, 1872**

Hydrothelphusa A. Milne-Edwards, 1872: 2; *Bottia* Pretzmann, 1961: 162.

***Hydrothelphusa madagascariensis* (A. Milne-Edwards, 1872)**

Thelphusa madagascariensis A. Milne-Edwards, 1872: 1; *Hydrothelphusa agilis madagascariensis*, Bott 1965: 341-342, pl. 3, figs 10-11.

Material. Madagascar, Indian Ocean, Bijofa? Biosso?, 1♀ ad. cw 34.7, Decary coll. (ZSM 1533/2 ex 1162/2, alte ZSM Nr. 1928, don. MNHN); Toamasina (formerly Tamatave), 1♀ ad. cw 61.7, Dr. J. Millot coll. (ZSM 1533/1, ex 1162/1 (split lot), alte ZSM Nr. 1928, don. MNHN Nr. 422).

Comments. Bott (1965) recognised two species of *Hydrothelphusa* (*H. agilis* and *H. humbloti*) and two subspecies of *H. agilis*: *H. a. agilis* and *H. a. madagascariensis*. *Hydrothelphusa madagascariensis* is considered to a valid species on the basis of a number of differences between *H. agilis* and *H. madagascariensis*.

Hydrothelphusa humbloti (Rathbun, 1904)

Potamon (*Potamon*) *humbloti* Rathbun, 1904: 297-298, pl. 12, fig. 10; *Potamon* (*Potamon*) *bombetokensis* Rathbun, 1904: 298, pl. 12, fig. 6; Balss 1929a: 354; *Hydrothelphusa humbloti*, Bott 1965: 342-344, pl. 3, figs 12-13, figs 5-6.

Material. Madagascar, Indian Ocean, Farafangana, 1♂ ad. cw 41.9 (ZSM 1534/1 ex 1153/1, alte ZSM Nr. 1928, don. MNHN).

Comments. This species was recognised by Bott (1965) who considered *Potamon* (*P.*) *bombetokensis* Rathbun, 1904 to be a junior synonym.

Potamon (*Parathelphusa*) *antongilensis* Rathbun, 1905

Potamon (*Parathelphusa*) *antongilensis* Rathbun, 1905: 265-266, fig. 21, pl. 12, fig. 5; *Hydrothelphusa* (*Acanthothelphusa*) *antongilensis*, Bouvier 1921: 32, *Potamon* (*Geothelphusa*) *antongilensis*, Balss 1929a: 355, fig. 2, *Gecarcinautes antongilensis antongilensis*, Bott 1965: 337-338, figs 1-3, pl. 1, figs 1-3.

Material. Madagascar, Indian Ocean, Toamasina (formerly Tamatave), 2♂♂ ads. cws 30.7, 30.4, 2♂♂ juvs. cws 18.9, 15.8, 3♀♀ ad. 31.2 (ovig.), 29.0 (ovig.), 30.1, 1♀ subad. cw 23.5, Dr. J. Millot coll. (ZSM 1531/1, ex 1151/1).

Comments. These specimens correspond well with the type of *Potamon* (*P.*) *antongilensis* Rathbun, 1905 but it is difficult to assign them with any confidence to a genus. Balss (1929a) listed this species as *Potamon* (*Geothelphusa*) *antongilensis*, while Bott (1965) considered this species to be *Gecarcinautes a. antongilensis* (Rathbun, 1905).

Potamon (*Geothelphusa*) *ankaraharae* Nobili, 1906

Potamon (*Geothelphusa*) *ankaraharae* Nobili, 1906: 1-4, fig. A; *Parathelphusa* (*Barythelphusa*) *ankaraharae*, Colosi 1920, 22; *Potamon* (*Geothelphusa*) *ankaraharae*, Balss 1929a: 356; *Madagapotamon ankaraharae*, Bott 1965: 347-348, fig. 9, pl. 5, figs 23-25.

Material. Madagascar, Indian Ocean, Antsiranana (formerly Diego= Diégo-Suarez), 1♂ ad. cw 27.2, 1♀ ad. cw 25.7, 2 subads., cw 21.7 (♂), cw 19.4 (♀), J. Millot coll. (ZSM 1475/1, alte ZSM Nr. 1928).

Comments. These specimens were listed by Balss (1929a) as *Potamon* (*Geothelphusa*) *ankaraharae* and by Bott (1965) as *Madagapotamon ankaraharae*. These specimens are close in a number of respects to *Skelosophusa prolixa* Ng. & Takeda, 1994, and similarities in the gonopods and carapace characters would support this. However, the legs of the specimens in the ZSM are not elongated and the ischium of the third maxilliped is smooth and lacks a vertical sulcus. Furthermore, there is a distinct anterior process on the terminal segment of the mandibular palp in these specimens. Ng & Takeda (1994) describe the terminal segment of the mandibular palp of *S. prolixa* as simple, but their illustrations indicate a small but distinct anterior process. Significant differences in characters of the carapace argue against the inclusion of these specimens in either *Gecarcinautes*, *Hydrothelphusa* and *Madagapotamon*, despite Bott's (1965) referral of these specimens to the latter genus.

Potamon (*Potamon*) *pittarrelli* Nobili, 1905

Potamon (*Potamon*) *pittarrelli* Nobili, 1905: 1-4, fig. 1.

Material. Madagascar, Indian Ocean, Grotte de la Mananjiba, Ankarana district, Ambilobé, 1924, 2 ??? juvs. cws 12.8, 11.6, Waterlott coll. (ZSM 1163/1).

Comments. These specimens conform in many respects to the genus *Skelosophusa* in that the mandibular palp has two segments, the terminal segment of the mandibular palp is simple, and the walking legs are extremely long and thin. However, both of these specimens are juveniles and without a knowledge of the form of the adult gonopods it is difficult to make a definitive identification.

Zusammenfassung

Die Sammlung der Süßwasserkrabben Afrikas und Madagaskars in der Zoologischen Staatssammlung, München, wurde überprüft. Die Sammlung enthält 28 Arten der Gattung *Potamonautes*, 7 Arten von *Sudanonautes*, je zwei Arten von *Platythelphusa*, *Hydrothelphusa*, *Deckenia*, *Potamonemus*, und *Louisea* und je eine Art von *Liberonautes*, *Gecarcinautes* and *Potamon*. Ferner sind in der Sammlung der Holotypus von *Louisea edeensis* und die Paratypen von *L. balssi*, *Sudanonautes monodi* und *Potamonautes gerdalensis* vorhanden.

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